

**AMENDMENTS TO THE CLAIMS**

1. (Original) A preparation comprising one or more polyclonal, monoclonal, chimeric, humanized, human or anti-anti-idiotypic antibodies and/or fragments thereof being capable of specifically binding an amino acid sequence, or a portion of said amino acid sequence selected from SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 18, 19, 20, or 22.

2. (Original) The antibody preparation of claim 1, wherein said amino acid sequence is selected from SEQ ID NO: 7, 8, 11, 12, 13 and/or 15.

3. (Original) The antibody preparation of claim 1, wherein said amino acid sequence is located in the flanking region of the NIK kinase domain.

4. (Original) The antibody preparation of claim 1 wherein said amino acid sequence is SEQ ID NO: 7.

5. (Original) The antibody preparation of claim 1 wherein said amino acid sequence is SEQ ID NO: 11.

6. (Original) The antibody preparation of claim 3 wherein said amino acid sequence is SEQ ID NO: 12.

7. (Original) The antibody preparation of claim 1, wherein said antibody is an IgG antibody.

8. (Original) The antibody preparation of claim 1, wherein said antibody fragment is selected from the group consisting of a single-chain Fv, an Fab, an Fab', an F(ab')<sub>2</sub>, and a CDR.

9. (Original) The antibody preparation of claim 1, wherein said antibody or antibody fragment is further capable of regulating a biochemical activity of a NIK molecule.

10. (Currently amended) The antibody preparation according to ~~anyone of the preceding claims~~ claim 1, wherein said antibody or antibody fragment is further capable of specifically detecting NIK or a mutein, functional derivative, active fraction, circularly permuted derivative, salt or a portion thereof.

11. (Original) The antibody preparation according to claim 10, capable of specifically detecting NIK by Western immunoblotting analysis.

12. (Original) The antibody preparation according to claim 10, capable of specifically detecting NIK by ELISA.

13. (Original) The antibody preparation according to claim 10, capable of specifically detecting NIK by immunoprecipitation.

14. (Currently amended) A preparation comprising one or more polyclonal, monoclonal, chimeric, humanized, human or anti-anti-idiotypic antibodies and/or fragments

thereof being capable of specifically binding NIK or a mutein, functional derivative, active fraction, circularly permuted derivative or salt thereof, the antibody prepared by immunizing a mammal with a peptide comprising an ~~amin-acid~~amino acid sequence, or a portion of said amino acid sequence set forth SEQ ID NO: 7.

15. (Original) A preparation according to claim 14, capable of detecting murine NIK.

16. (Original) A preparation according to claim 14, prepared by immunizing a rodent.

17. (Original) A method for preparing a monoclonal antibody comprising immunizing a mammal with a peptide, which is part of an amino acid sequence of NIK, and is selected from SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 18, 19, 20, or 22.

18. (Canceled)

19. (Original) A monoclonal antibody specifically binding an amino acid sequence, or a portion of said amino acid sequence which is part of an amino acid sequence of NIK, and is selected from SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 18, 19, 20, or 22.

20. (Original) The monoclonal antibody of claim 19, wherein said amino acid sequence is in the flanking region of the NIK kinase domain.

21. (Original) The monoclonal antibody of claim 19, wherein said amino acid sequence is set forth in SEQ ID NO: 7.

22. (Original) The monoclonal antibody of claim 19, wherein said amino acid sequence is set forth in SEQ ID NO: 11.

23. (Original) The monoclonal antibody of claim 19, wherein said amino acid sequence is set forth in SEQ ID NO: 12.

24. (Original) The monoclonal antibody of claim 19, being monoclonal antibodies generated by hybridoma clone Pep 7-81.1 deposited at the CNCM under No.1-3092.

25. (Original) The monoclonal antibody of claim 19, being monoclonal antibodies generated by hybridoma clone Pep 11-355.8 deposited at the CNCM under No.1-3093.

26. (Currently amended) The monoclonal antibody of claim 19, being monoclonal antibodies generated by hybridoma clone Pep 12-629-62-18 deposited at the CNCM under ~~No.1-3095~~ No. 1-3094.

27. (Original) An hybridoma clone deposited at the CNCM under No. I-3092

28. (Original) An hybridoma clone deposited at the CNCM under No. I-3093
29. (Original) An hybridoma clone deposited at the CNCM under No.1-3094.
30. (Original) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and, as an active ingredient, a preparation comprising one or more polyclonal, monoclonal, chimeric, humanized, human or anti-anti-idiotypic antibodies and/or fragments thereof being capable of specifically binding an amino acid sequence, or a portion of said amino acid sequence selected from SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 18, 19, 20, or 22.
31. (Original) The pharmaceutical composition of claim 30, wherein said amino acid sequence is selected from SEQ ID NO: 7, 8, 11, 12, 13 and/or 15.
32. (Original) The pharmaceutical composition of claim 30, wherein said amino acid sequence is SEQ ID NO: 7.
33. (Original) The pharmaceutical composition of claim 30, wherein said amino acid sequence is SEQ ID NO: 11.
34. (Original) The pharmaceutical composition of claim 30, wherein said amino acid sequence is SEQ ID NO: 12.

35. (Original) The pharmaceutical composition of claim 30, wherein said antibody is an IgG antibody.

36. (Original) The pharmaceutical composition of claim 30, wherein said antibody or antibody fragment is derived from mouse.

37. (Original) The pharmaceutical composition of claim 30, wherein said antibody fragment is selected from the group consisting of a single-chain Fv, an Fab, an Fab', an F (ab')<sub>2</sub> and a CDR.

38. (Original) The pharmaceutical composition of claim 30, wherein said antibody or antibody fragment is further capable of regulating a biochemical activity of a NIK molecule.

39. (Original) A method of regulating a biochemical activity of a NIK molecule, the method comprising contacting the NIK molecule with a preparation comprising one or more polyclonal, monoclonal, chimeric, humanized, human or anti-anti-idiotypic antibodies and/or fragments thereof being capable of specifically binding an amino acid sequence, or a portion of said amino acid sequence selected from SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 18, 19, 20, or 22, thereby regulating a biochemical activity of a NIK molecule.

40. (Original) The method of claim 39, wherein said contacting the NIK molecule with said preparation is effected by administering said preparation to an individual.

41. (Original) The method of claim 39, wherein said amino acid sequence is selected from SEQ ID NO: 7, 8, 11, 12, 13 and and/or 15.

42. (Original) The method of claim 39, wherein said amino acid sequence is SEQ ID NO: 7.

43. (Original) The method of claim 39, wherein said amino acid sequence is SEQ ID NO: 11.

44. (Original) The method of claim 39, wherein said amino acid sequence is SEQ ID NO: 12.

45. (Original) The method of claim 39, wherein said antibody is an IgG antibody.

46. (Original) The method of claim 41, wherein said antibody or antibody fragment is derived from mouse.

47. (Original) The method of claim 39, wherein said antibody fragment is selected from the group consisting of a single-chain Fv, an Fab, an Fab', an F(ab')<sub>2</sub> and a CDR.

48. (Original) A composition-of-matter comprising a substrate covalently attached to a polypeptide including an amino acid sequence, or a portion of said amino acid

sequence, said amino acid sequence selected from SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 18, 19, 20, or 22 for selectively capturing the antibody or antibody fragment capable of specifically binding the target antigen.

49. (Original) The composition-of-matter of claim 48, wherein said amino acid sequence is selected from SEQ ID NO: 7, 8, 11, 12, 13 and/or 15.

50. (Original) The composition-of-matter of claim 48, wherein said amino acid sequence is SEQ ID NO: 7.

51. (Original) The composition-of-matter of claim 48, wherein said amino acid sequence is SEQ ID NO: 11.

52. (Original) The composition-of-matter of claim 48, wherein said amino acid sequence is SEQ ID NO: 12.

53. (Original) The composition-of-matter of claim 48, wherein said substrate is an affinity chromatography matrix.

54. (Original) The composition-of-matter of claim 48, wherein said substrate comprises a carbohydrate or a derivative of said carbohydrate.

55. (Original) The composition-of-matter of claim 48, wherein said carbohydrate is selected from the group consisting of agarose, sepharose, and cellulose.



56. (Original) The composition-of-matter of claim 49, wherein said substrate is selected from the group consisting of a bead, a resin, or a plastic surface.

57.-64. (Canceled)

65. (Original) A method for preparing a monoclonal antibody comprising growing a cloned hybridoma comprising a spleen cell from a mammal immunized with an amino acid sequence, or a portion of said amino acid sequence, said amino acid selected from SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 18, 19, 20, or 22, and a homogeneous or heterogeneous lymphoid cell in liquid medium or mammalian abdomen to allow the hybridoma to produce and accumulate the monoclonal antibody.

66. (Currently amended) A method of claim 65, wherein the amino acid sequence ~~sequence~~ is selected from SEQ ID NO: 7, 8, 11, 12, 13 and/or 15.

67 (Currently amended) A method of claim 65, wherein the amino acid sequence ~~sequence~~ is SEQ ID NO: 7.

68. (Currently amended) A method of claim 65, wherein the amino acid sequence ~~sequence~~ is SEQ ID NO: 11.

69. (Currently amended) A method of claim 65, wherein the amino acid sequence ~~sequence~~ is SEQ ID NO: 12.

70. (Original) A method of treatment of a disease caused or aggravated by the activity of NIK, comprising the administration of a preparation comprising one or more polyclonal, monoclonal, chimeric, humanized, human or anti- anti-idiotypic antibodies and/or fragments thereof being capable of specifically binding an amino acid sequence, or a portion of said amino acid sequence selected from SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 18, 19, 20, or 22 to an individual in need.

71. (Original) The method of claim 70, wherein said amino acid sequence is selected from SEQ ID NO: 7, 8, 11, 12, 13 and and/or 15.

72. (Original) The method of claim 70, wherein said amino acid sequence is SEQ ID NO : 7.

73. (Original) The method of claim 70, wherein said amino acid sequence is SEQ ID NO: 11.

74. (Original) The method of claim 70, wherein said amino acid sequence is SEQ ID NO: 12.

75. (Original) The method of claim 70, wherein said antibody is an IgG antibody.

76. (Original) The method of claim 71, wherein said antibody or antibody fragment is derived from mouse.

77. (Original) The method of claim 70, wherein said antibody fragment is selected from the group consisting of a single-chain Fv, an Fab, an Fab', an F (ab')<sub>2</sub> and a CDR.

78. (Original) A method of treatment according to claim 70, wherein the disease is selected from a malignant diseases and diseases associated with pathological immune responses.

79. (Original) A method of treatment according to claim 78, wherein the disease associated with pathological immune responses is selected from autoimmune, allergic, inflammatory, and transplantation-related diseases.

80. (Original) A method of treatment according to claim 79, wherein the disease is selected from, asthma, rheumatoid arthritis, inflammatory bowel disease, atherosclerosis and Alzheimer's disease.

81. (Original) A method of treatment according to claim 78 wherein the disease is a malignant disease.

82. (Original) A method for the purification of a NIK binding protein, which comprises contacting a sample containing NIK and the NIK-binding protein with an antibody preparation according to anyone of claims 1 to 15, or an antibody according to anyone of

claims 17 to 25, co-immunoprecipitating the NIK and NIK-binding protein, washing the immune complex produced, and recovering the NIK-binding protein from the immune complex using a competing peptide derived from NIK.

83. (Original) A method according to claim 82, wherein the sample is selected from body fluids, cell extracts and DNA expression libraries.

84.-85. (Canceled)